IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Ralf Landgraf	**Examiner:**	Jason Berman
Serial No.:	10/520,755	**Art Unit:**	1795
Filed:	January 10, 2005	**Docket:**	18501
For:	TARGET SUPPORT ASSEMBLY	**Dated:**	March 17, 2010

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United States Patent and Trademark Office
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Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Pursuant to 35 U.S.C. 134 and 37 C.F.R. 41.37, entry of this Appeal Brief in support of the Notice of Appeal filed January 21, 2010, in the above-identified matter is respectfully requested.

CERTIFICATE OF ELECTRONIC FILING

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Date: March 17, 2010

Leopold Presser

I. Statement of Real Party in Interest

The real party in interest in the above-identified patent application is the Interpane Entwicklungs – und Beratungsgesellschaft MBH & Co. KG, Lauenforde, Germany.

II. Statement of Related Appeals and Interferences

There are no other prior or pending appeals, interferences or judicial proceedings known to appellants, the appellants' legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. Status of Claims

A. Claim Status

Claims1-16 have been cancelled (in the Amendment dated January 30, 2009).

Claim 17 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders, U.S. Patent No. 5,531,876 in view of Ueda, Japanese Publication JP 2002155356 (cited in an IDS as WO 02/20866).

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders, U.S. Patent No. 5,531,876 in view of Ueda, Japanese Publication JP 2002155356 (cited in an IDS as WO 02/20866).

Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders, U.S. Patent No. 5,531,876 in view of Ueda, Japanese Publication JP 2002155356 (cited in an IDS as WO 02/20866).

Claim 20 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders, U.S. Patent No. 5,531,876 in view of Ueda, Japanese Publication JP 2002155356 (cited in an IDS as WO 02/20866).

Claim 21 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders, U.S. Patent No. 5,531,876 in view of Ueda, Japanese Publication JP 2002155356 (cited in an IDS as WO 02/20866).

Claim 22 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Saunders, U.S. Patent No. 5,531,876 in view of Ueda, Japanese Publication JP 2002155356 (cited in an IDS as WO 02/20866).

Claim 23 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda, Japanese Publication No. 2002155356 in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

Claim 24 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda, Japanese Publication No. 2002155356 in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

Claim 25 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda, Japanese Publication No. 2002155356 in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda, Japanese Publication No. 2002155356 in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

Claim 27 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda, Japanese Publication No. 2002155356 in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

Claim 28 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda, Japanese Publication No. 2002155356 in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

B. Appealed Claims

Claims 17-28 (as submitted in the Amendment dated June 10, 2009) are appealed. A clean copy of these claims is contained in Appendix A to this Appeal Brief.

IV. Status of Amendments

No amendments are pending in this application. The last Amendment filed in this case was filed in the U.S. Patent and Trademark Office on December 22, 2009. That Amendment has not been entered by the Examiner.

V. Summary of Claimed Subject Matter

The invention is based on a target support assembly as defined in the appeal claims, wherein a target lining is formed by a target sleeve that is slid onto a support and fixed in a thermally and electrically conductive manner (Figs. 1, 5 and 6).

(a) Concise Explanation of the Subject Matter of Claim 17:

17. The invention is directed to the provision of a target support assembly (I), comprising a cylindrical support sleeve (2) [Page 5, lines 30 and 31 of specification, Fig. 1 and 5] on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2) [Page 5, lines 31 and 32 of specification, Figs. 1 and 5], wherein a plurality of elastically-active clamping elements (6) [Page 6, lines 17-21 of the specification, Figs. 4 and 5] being distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) [Page 7, lines 11-13 of specification; Figs. 4 and 5] of a plurality of recesses formed in the external cylindrical surface [Page 2, lines 30 and 31, Fig. 4] of the support sleeve (2) [Page 8, lines 11-19, Fig. 4], each said clamping element 96) having a portion (6a) [Page 6, lines 25-29, Fig. 4] press-fitted in the therewith associated recess (8) and possessing a radially projecting portion (6a, b, c) [Page 6, line 25 –

Page 7, line 27; Figs. 4 and 5] in clamping contact with the internal cylindrical surface of the target sleeve (4) that is located opposite said clamping elements (6); [Page 6, lines 17-23 of specification, Fig. 4]; the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material [Page 7, line 29 – Page 8, line 2; Figs. 4 and 5]; each of said clamping elements (6) being constituted of an angled leaf spring [Page 7, lines 26 and 27 of specification; Fig. 4 and 5] having the portion (6c) forming a base arm (6d) extending along the bottom of the therewith associated recess (8) [Page 7, lines 14-16; Figs. 4 and 5] and wherein the base arm (6e) has opposite ends wedged between the side walls of the recess (8) and a clamping arm (6a) of said clamping element [Page 7, lines 14-19 of specification, Figs. 4 and 5] extending radially angled outwardly from said recess (8), said clamping arm (6a) having a free end forming an outwardly curvilinear portion (6b, c) [Page 6, line 29 – Page 7, line 9; Fig. 5] for clampingly contacting the oppositely located surface of the target sleeve (4).

(b) Concise Explanation of the Subject Matter of Claim 18:

18. The invention is further directed to a target support assembly (I), comprising a cylindrical support sleeve (2) [Page 5, lines 30 and 31 of specification; Figs. 1 and 5] on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2) [Page 5, lines 31 and 32 of specification, Figs. 1 and 5], wherein a plurality of elastically active clamping elements (6) [Page 6, lines 17-21 of specification; Figs. 4 and 5] distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) [Page 7, lines 11-13 of specification; Figs. 4 and 5] of

a plurality of recesses formed in the internal cylindrical surface of the target sleeve (4) [Page 2, lines 28-30; Fig. 1], each said clamping element (6) having a portion (6a) [Page 6, lines 25-29; Fig. 4] press-fitted in the therewith associated recess (8) and possessing a radially projecting portion (6a, b, c) [Page 6, lines 25 – Page 7, line 27; Figs. 4 and 5] in clamping contact with the external cylindrical surface of the support sleeve (2) that is located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material [Page 7, line 29 – Page 8, line 2; Figs. 4 and 5]; each of said clamping elements (6) being constituted of an angled leaf spring [Page 7, lines 26 and 27; Fig. 4 and 5] having the portion (6c) forming a base arm (6d) extending along the bottom of the therewith associated recess (8) [Page 7, lines 14-16; Figs. 4 and 5], and wherein the base arm (6e) has opposite ends wedged between the side walls of the recess (8) and a clamping arm (6a) of said clamping element [Page 7, lines 14-19, Figs. 4 and 5] extending radially angled outwardly from said recess (8), said clamping arm (6a) having a free end forming an outwardly curvilinear portion (6b, c) [Page 6, line 29 – Page 7, line 9; Fig. 5]for clampingly contacting the oppositely located surface of the support sleeve. (2); and wherein the clamping elements (6) have selectively rounded or oblique insertion edges (6b, 6c) on both sides facing in an axial direction.

(c) Concise Explanation of the Subject Matter of Claim 23:

23. Another aspect of the invention resides in a target support assembly (I), comprising a cylindrical support sleeve (2) [Page 5, lines 30 and 31 of specification; Figs. 1, 6 and 7] on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2) [Page 5, lines 31 and 32 of specification; Figs. 7 and 7], wherein a plurality of elastically active clamping elements (6) [Page 6, lines 17-21 of

specification; Figs. 6 and 7] distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) [Page 9, lines 18-20 of specification; Figs. 6 and 7] of a plurality of recesses formed in the external cylindrical surface of the support sleeve (2), each said clamping element (6) having a portion (6a) located in the therewith associated recess (8) and a radially projecting portion (6b, c) [Page 9, lines 20-27 of specification; Fig. 6] in clamping contact with the internal cylindrical surface of the target-sleeve (4) [Page 6, lines 17-23 of specification; Figs. 6 and 7] located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material [Page 7, line 24 – Page 8, line 2 of specification; Figs. 6 and 7]; each of said clamping elements (6) being constituted of a ring-shaped tubular member of hollow cross-section having portion (6a) extending along a curved bottom of the therewith associated recess (8) and between the side walls of the recess (8) [Page 10 of specification, lines 1-3; Figs. 6 and 7], the curved bottom of said recess (8) being a concavely rounded base and the cross-section of the clamping element (6) being correspondingly convexly rounded [Page 10, lines 4-7 of specification; Figs. 6 and 7], and with portion (6b, c) forming a resilient clamping surface extending radially outwardly of said recess (8), said clamping surface (6b, c) having a deformable curvilinear shape [Page 9, lines 1-8 of specification; Fig. 7] for clampingly contacting the oppositely located surface of the target sleeve.

(d) Concise Explanation of the Subject Matter of Claim 24:

24. A still further aspect resides in the provision of a target support assembly (I), comprising a cylindrical support sleeve (2) [Page 5, lines 30 and 31; Figs. 1, 6 and 7] on

which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2), [Page 5, lines 31 and 32, Figs. 1 and 7] wherein a plurality of elastically active clamping elements (6) [Page 6, lines 17-21 of specification; Figs. 6 and 7] distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) [Page 9, lines 18-20 of specification; Figs. 6 and 7] of a plurality of recesses formed in the internal cylindrical surface of the target sleeve (4) [Page 2, lines 28-30 of specification, Fig. 1], each said clamping element (6) having a portion (6a) located in the therewith associated recess (8) and a radially projecting portion (6a, b, c) [Page 9, lines 20-27 of specification; Fig. 6] in clamping contact with the external cylindrical surface of the support sleeve (2) located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material [Page 7, line 29-Pge 8, line 2 of specification; Figs. 6 and 7]; each of said clamping elements (6) being constituted of a ring-shaped tubular member of hollow cross-section having portion (6a) extending along a curved bottom of the therewith associated recess (8) and between the side walls of the recess (8) [Page 10, lines 1-3 of specification, Figs. 6 and 7], the curved bottom of said recess (8) being a concavely rounded base and the cross-section of the clamping element (6) being correspondingly convexly rounded [Page 10, lines 4-7 of specification, Figs. 6 and 7], and with portion (6b, c) forming a resilient clamping surface extending radially outwardly of said recess (8), said clamping surface (6b, c) having a deformable curvilinear shape [Page 9, lines 1-8 of specification, Fig. 7] for clampingly contacting the oppositely located surface of the support sleeve.

The present invention, solves a problem in constructing a target support assembly with holder structure, which incorporates an improved heat conductivity and/or electrical conductivity.

These advantages are clearly discussed in the present specification (Pages 1-4) and also set forth in the appealed claims, and wherein the solution to the problem that is encountered in both prior art publications, resides in the following:

The solution of the problem in providing a target support assembly which has clamping elements (6), wherein the clamping elements (6) are, in each case, made of an elastically deformable and/or compressible material, such as in the flow of leaf springs, and/or wherein the clamping elements (6) are tubular elements made of synthetic material and in that particles or fibers of electrically and/or thermally conductive material may be embedded in the material of the clamping elements (6), and/or wherein the clamping elements (6) have in each case, at least on their inner side, a convexly rounded cross-sectional form and the base of the recess is preferably rounded correspondingly.

VI. Grounds of Rejection to be Reviewed On Appeal

Appellants ask that each of the following grounds be reviewed:

1. Whether Claim 17–22 are unpatentable under 35 U.S.C. §103(a) over Saunders U.S. Patent No. 5,531,876 in view of Ueda, JP 2002155356.

2. Whether Claim 23–28 are unpatentable under 35 U.S.C. §103(a) over Ueda in view of Ikeda, JP 01193463A and Morgan, U.S. Patent No. 5,591,314.

VII. Argument

A. The rejection under 35 U.S.C. 103(a) of Claims 17-22 as being unpatenable over Saunders U.S. Patent No. 5,531,876 in view of Ueda.

1. Claims 17-22

The rejection of Claim 17-22 should be reversed inasmuch as the art fails to disclose the particular features sets forth in the claims concerning the specific arrangement constituted of the resilient and thermally and electrically conductive leaf spring structure interconnecting the target lining formed by the cylindrical target leaf (4) and the cylindrical support sleeve for the target support assembly.

The foregoing advantageous spring structure cannot in any manner be ascertained, wherein the Examiner's contention that the claims are obvious or unpatentable in view of the art is clearly inapplicable in view of the particular advantages obtained by the present structure.

Concerning the foregoing, the use of the particular recesses in conjunction with the resilient or flexible leaf springs which are employed in the various locations do not in any manner suggested nor disclosed in the art, and the Examiner's position that, although the various integers are not disclosed in the prior art but would render obvious to one skilled in the technology is clearly inapplicable to the appealed claims.

Reverting in greater particularity to the Examiner's rejection of independent Claims 17 and 18, as well as Claims 19-22 which are either directly or indirectly dependent therefrom,

Applicants respectfully submit that Claims 17 and 18, as currently on file, are clearly directed to patentable subject matter.

Concerning the foregoing, Applicant note the Examiner contends that the leaf springs in Saunders are angled. However, referring to Figure 2 of Saunders, an angle of these clamping elements would normally be defined between two even or straight lines; however, the particular clamping element which is described in Saunders possesses only a single even or straight line. Moreover, Appellants respectfully disagree with the Examiner that the clamping elements in Saunders have a base on which opposite ends are wedged between the sidewalls of a recess. However, in actuality, the clamping elements of Saunders posses a single base arm which is not wedged, but rather welded at one end thereof to the electrode, in effect, the support sleeve. Consequently, the base arm in Saunders does not actually possess opposite ends, since the one end which is opposite to that which is welded is the beginning of a curved portion of the clamping element, as illustrated in Figure 2 of Saunders. Applicants respectfully note that the previous Amendment clearly considered the foregoing aspect and distinctions.

Even combining Saunders with Ueda would not, in any manner, disclose nor suggest the present invention as set forth in appealed Claims 17 and 18; inasmuch as the inventive clamping elements are of an entirely different configuration and construction than those in either Saunders or Ueda, irrespective as to whether these are considered singly or in combination.

Thus, in Ueda, the clamping elements comprise O-rings but not springs, whereby the combination of Saunders with Ueda only provides a vague suggestion adapted to create a cylindrical support sleeve with the clamping elements, or to create a flat support sleeve as in Saunders with the O-rings from Ueda. Whereas only the first alternative set forth in the art has any kind of limited affinity with the present invention, it is crucial to note that the clamping element of Saunders is welded on the support sleeve at one of its ends, whereas, to the contrary, the inventive clamping element as set forth in the pending claims, is only wedged between the walls of the recess in which the former is located.

Moreover, the clamping elements in Saunders are not appropriate for use thereof in clamping two cylindrical sleeves in a radial orientation inasmuch as only the bowed curvilinear part of the clamping element produces a wedging effect which is rather poor in nature in conjunction with the welded end thereof. Thus, any exertion of a radial force against the clamping element would cause a breaking off of the latter. This is because any such radial force would press along the extent of the base arm of the clamping element, whereas pursuant to the present invention, the radial force exerted against the clamping element is effected at a right angle to the base arm of the clamping element.

Consequently, there is maintained the wedged attachment of the clamping element as set forth in the claims herein, but not the fixed/welded attachment of the clamping element as set forth in Saunders. Moreover, it can be clearly ascertained that any mounting the inventive cylindrical target sleeve on the cylindrical support sleeve while using a clamping element or elements pursuant to Saunders would be practically impossible, inasmuch as the Saunders clamping elements provide for a poor radial welding effect, and the welding attachments are

subject to stressing in response to mounting thereof. The only feasible way of mounting the target sleeve onto the support sleeve without stressing the welding element (in a lateral orientation), would be to construct a target sleeve with a hinge extending in parallel with the axis of the cylinder. This would, however, be an extremely complicated and expensive solution to the foregoing problem and, moreover, is not disclosed or even suggested in either Saunders or Ueda.

Consequently, with respect to Claims 17 and 18 and Claims 19-22 which are dependent therefrom, these clearly and unambiguously are patentably distinct over the art represented by Saunders and Ueda, irrespective as to whether these publications are considered singly or in combination.

Furthermore, Applicant notes that the physical structures and their related function set forth in Claims 17 and 18 do not in any manner suggest in the references cited by the Examiner, nor would the latter be capable of providing the clamping interconnection between the particular components 2 and 4 analogous to the present structure, wherein in particular the recesses (8) containing the resilient angled leaf springs (6) cannot in any manner be ascertained from the prior art.

Concerning the dependent Claims 19-22, which are alternatively dependent from either Claim 17 or Claim 18, Claim 19 presents the further feature that the clamping elements consisting of the leaf springs have the selectively rounded or oblique insertion edges on both sides facing in an axial direction.

With respect to Claim 20, the clamping elements consisting of the leaf springs have in each instance a clamping arm which exerts a clamping pressure exerted by means of the free outwardly extending end portion of the clamping arm.

With respect to dependent Claim 21, this provides for an insertion segment of the leaf spring in each instance being arranged at the free end of the clamping arm so as to form an angle or a rounded roof shaped element in conjunction therewith.

Furthermore, with respect to Claim 22, the free end of the insertion segment is supported opposite to the clamping pressure in the clamped position thereof so as to further assist in the engagement between the components 2 and 4.

None of these particular elements can be either remotely ascertained from nor suggested from the prior art, and are deemed to be clearly novel and patentable by appellants.

2. Claims 23-28

These particular claims are in a manner somewhat analogous to above-discussed Claims 17-22, in lieu of the resilient leaf spring pertain to a resilient element also possessing heat and electrically conductive elastic characteristics, but are in this embodiment constituted of either hollow or solid tubular materials which are adapted to be inserted into the recesses (8) so as to form the clamping elements between components (2 and 4).

None of the references of record cited by the Examiner provide for that type of structure, although in one instance, the prior art does disclose O-rings which are employed for a completely different purpose, as is well known relative to the O-ring applications.

Concerning the cited art as applied to these claims, i.e, Ueda and Ikeda, and particularly Ueda which discloses a method of manufacturing a cylindrical target including using a damping member (52) such as may be constituted of carbon felt between a metal packing tube as an inner tube and a cylindrical carbon material as an outer tube, while connecting both components to each other. This increases the capability of selection of a target material and packing tube material supporting the target material, and also the cylindrical targets can be easily manufactured and reused. A cooling member which is formed as a heat resistant O-ring is disposed at the inner surface portion of the target material. Moreover, the O-ring in Ueda has a convexly rounded cross-sectional form; however, the base of the recess in which it is positioned is not correspondingly rounded, contrary to the present invention, and in which the cross-section in the recess of Ueda is of a rectangular or tapered wall configuration. Consequently, the advantages of providing the rounded base in conformance with the external surface configuration of the O-ring as provided for by the present invention, and the advantages obtained thereby by an increased surface contact area, are not at all disclosed in Ueda, and appealed Claims 23 and 24, as well as the therefrom dependent claims, clearly are novel and patentable thereover.

Reverting to Ikeda, the latter discloses a vacuum sealed structure in a vacuum working device provided to prevent any high frequency electrical wave from leakage, in an economical manner by means of a simple structure through the utilization of a conductive elastic body

employed as a vacuum sealing O-ring. This is obtained by the O-ring, having a volumetric resistance value which is less than a specific value distributed over the entire periphery of a vacuum sealing portion. Thus, in describing the operation of a vacuum working device, a lid (3) which covers the upper surface of a flange (1a) over a chamber (1) has an O-ring (4) fitted in a groove (1b) found in a flange (1a) of a lower chamber (1) that is positioned in an intimate or close contact with a lower surface of the lid (3). This enables a vacuum tank (2) to be completely sealed from the exterior in order to be able to maintain the vacuum condition, and moreover, high-frequency electrical waves from a high-frequency applying section in the vacuum tank (2), while the high-frequency electrical waves are prevented from leaking from a sealing portion of the vacuum working device, since the conductive O-ring (4) extends over the entire periphery of the sealing portion. Thus, when the O-ring (4) has a volumetric resistance value that is less than 5Ωcm, the shielding property can be readily maintained in order to prevent the high-frequency electrical waves from any leakage.

Hereby, the O-ring which is disclosed in Ikeda, having a convexly rounded cross-sectional shape, is arranged in a groove or recess having a base that is not correspondingly rounded, and consequently this results in a reduced contact surface whereas, in addition, the cross-section of the groove is angled in its wall structure, having reference to Figure 1 of the reference. Consequently, the particular O-ring configuration pursuant to the invention, in cooperation with the conformingly shaped recess is clearly novel over Ikeda, as set forth in appealed Claims 23 and 24, irrespective as to whether Ikeda is considered either singly or in combination with Ueda.

Moreover, a combination of Ueda with Ikeda provides for significant drawbacks in comparison with the present clamping element when in the form of O-rings, as in Figures 6 and 7. Thus, in the prior art there is provided a cylindrical target with compressible electrically conductive, and cross sectionally convexly rounded clamping and sealing elements which are employed in mounting a target sleeve on a support sleeve. The clamping elements are O-rings which are arranged in circumferentially extending recesses each having either a rectangular or angled side walls rather than the curved base portions as provided for by the present invention and as set forth in the appealed claims.

Also, a further major distinction of the prior art structures represented in Ueda and Ikeda with regard to the appealed claims resides in that the conductivity between the target sleeve from the support sleeve which is due to the geometry of the O-ring elements and their recesses not being optimized in view of the extremely small contact surfaces which are present between the O-rings which are rounded in transverse cross section, and the shapes of the recesses which are rectangular or angled in their wall surfaces in transverse section, even though the O-rings are essentially of a compressible and somewhat deformable material.

In summation, the construction of the recess shown in Figures 6 and 7 of the present invention, in conjunction with the O-ring when the latter is formed convexly and the recess is formed concavely with a rounded bottom will provide for a contact surface for an O-ring and the recess which is considerably greater than the O-ring and the angled or straight-walled recess disclosed in, respectively, Ueda and Ikeda, notwithstanding the fact that the O-ring is only slightly compressed. Consequently, both as to thermal conductivity and electrical conductivity between the target sleeve and support sleeve the present invention provides

superior properties in comparison with the prior art, irrespective as to whether the latter is considered singly or in combination, and the appealed Claims 23-28 are deemed to be clearly patentable over the cited prior art.

Concerning the dependent claims 25 through 28 which are selectively dependent from either Claims 23 or 24, Appellants note as follows:

Claim 25 sets forth the further aspect that the essentially tubular clamping elements have in the area of an opening of the therewith associated recess shape which is convexly rounded when viewed transversely to the axial direction of the support sleeve.

With respect to Claim 26, this indicates that both the clamping elements and the recess have annular configurations which provide for a greater and improved surface contact area.

With respect to Claim 27, this provides that at least one of the recesses formed as a groove which stands in particular directions on the cylindrical sleeve structure.

Finally, with respect to Claim 28, this indicates the particular length of the support sleeve being greater than the length of the target sleeve and at least one limiting part being detachably fixed on the support sleeve at one or both ends of the target source to axially position these components relative to each other.

Predicated on the foregoing comments presented in support of the presently appealed claims, the Board is respectfully requested to reconsider and withdraw the rejection of Claims 17-28 under 35 U.S.C. §103(a).

C. Conclusion

Based on the above discussed differences between the prior art and appealed Claims 17-28, the clear and applicability to the present invention by the prior art, the appealed claims are deemed to be clearly directed to patentable subject matter.

Claims 17, 18, 23 and 24, the independent claims are clearly and patentably defined over the art, whereas the various dependent Claims 19-22, and 25-28 which are dependent from respective of these claims are also directed to patentable subject matter. Thus the rejection of the claims as being unpatentable over the art is deemed to be improper and the Board is respectfully requested to reverse those rejections.

VIII. Claims Appendix

A clean copy of Claims 17-28 is contained in Appendix A to this Appeal Brief.

IX. Evidence Appendix

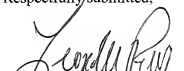
Appellants are not relying on any affidavits, extrinsic documents or extrinsic evidence.

X. Related Proceedings Appendix

As indicated above, there are no other prior or pending appeals, interferences or judicial proceedings known to appellants, the appellants' legal representative, or assignee which may

be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Respectfully submitted,



Dated: March 17, 2010

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LP:bk
Enclosure: Appendix A

APPENDIX A

17. Target support assembly (I), comprising a cylindrical support sleeve (2) on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2), wherein a plurality of elastically-active clamping elements (6) being distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) of a plurality of recesses formed in the external cylindrical surface of the support sleeve (2), each said clamping element (6) having a portion (6a) press-fitted in the therewith associated recess (8) and possessing a radially projecting portion (6a, b, c) in clamping contact with the internal cylindrical surface of the target sleeve (4) that is located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material; each of said clamping elements (6) being constituted of an angled leaf spring having the portion (6c) forming a base arm (6d) extending along the bottom of the therewith associated recess (8) and wherein the base arm (6e) has opposite ends wedged between the side walls of the recess (8) and a clamping arm (6a) of said clamping element extending radially angled outwardly from said recess (8), said clamping arm (6a) having a free end forming an outwardly curvilinear portion (6b, c) for clampingly contacting the oppositely located surface of the target sleeve (4).

18. Target support assembly (I), comprising a cylindrical support sleeve (2) on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2), wherein a plurality of elastically active clamping elements (6)

distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) of a plurality of recesses formed in the internal cylindrical surface of the target sleeve (4), each said clamping element (6) having a portion (6a) press-fitted in the therewith associated recess (8) and possessing a radially projecting portion (6a, b, c) in clamping contact with the external cylindrical surface of the support sleeve (2) that is located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material; each of said clamping elements (6) being constituted of an angled leaf spring having the portion (6c) forming a base arm (6d) extending along the bottom of the therewith associated recess (8), and wherein the base arm (6e) has opposite ends wedged between the side walls of the recess (8) and a clamping arm (6a) of said clamping element extending radially angled outwardly from said recess (8), said clamping arm (6a) having a free end forming an outwardly curvilinear portion (6b, c) for clampingly contacting the oppositely located surface of the support sleeve. (2).

19. Target support assembly according to Claim 17 or 18, wherein the clamping elements (6) have selectively rounded or oblique insertion edges (6b, 6c) on both sides facing in an axial direction.

20. Target support assembly according to Claim 17 or 18, wherein the clamping elements (6) have in each case a clamping arm (6a) that exerts the clamping pressure exerted with the free end portion of the clamping arm (6a).

21. Target support assembly according to Claim 17 or 18, wherein an insertion segment (6c) is arranged at the free end of the clamping arm (6a) and forms an angled or rounded roof-shaped element with the clamping arm (6a).

22. Target support assembly according to Claim 21, wherein the free end of the insertion segment (6c) is supported in opposition to the clamping pressure in the clamping position thereof.

23. Target support assembly (I), comprising a cylindrical support sleeve (2) on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2), wherein a plurality of elastically active clamping elements (6) distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) of a plurality of recesses formed in the external cylindrical surface of the support sleeve (2), each said clamping element (6) having a portion (6a) located in the therewith associated recess (8) and a radially projecting portion (6b, c) in clamping contact with the internal cylindrical surface of the target-sleeve (4) located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material; each of said clamping elements (6) being constituted of a ring-shaped tubular member of hollow cross-section having portion (6a) extending along a curved bottom of the therewith associated recess (8) and between the side walls of the recess (8), the curved bottom of said recess (8) being a concavely rounded base and the cross-section of the clamping element (6) being correspondingly convexly rounded, and with portion (6b, c) forming a resilient clamping

surface extending radially outwardly of said recess (8), said clamping surface (6b, c) having a deformable curvilinear shape for clampingly contacting the oppositely located surface of the target sleeve.

24. Target support assembly (I), comprising a cylindrical support sleeve (2) on which is arranged a target lining formed by a cylindrical target sleeve (4) that is slidingly arranged on the support sleeve (2), wherein a plurality of elastically active clamping elements (6) distributed between the facing circumferences of said sleeves are each arranged in a respective recess (8) of a plurality of recesses formed in the internal cylindrical surface of the target sleeve (4), each said clamping element (6) having a portion (6a) located in the therewith associated recess (8) and a radially projecting portion (6a, b, c) in clamping contact with the external cylindrical surface of the support sleeve (2) located opposite said clamping elements (6); the clamping elements (6) each comprising an elastically deformable and/or elastically compressible electrically and thermally conductive material; each of said clamping elements (6) being constituted of a ring-shaped tubular member of hollow cross-section having portion (6a) extending along a curved bottom of the therewith associated recess (8) and between the side walls of the recess (8), the curved bottom of said recess (8) being a concavely rounded base and the cross-section of the clamping element (6) being correspondingly convexly rounded, and with portion (6b, c) forming a resilient clamping surface extending radially outwardly of said recess (8), said clamping surface (6b, c) having a deformable curvilinear shape for clampingly contacting the oppositely located surface of the support sleeve.

25. Target support assembly according to Claim 23 or 24, wherein the clamping elements (6) have, at least in the area of an opening of the therewith associated recess (8), a shape that is convexly rounded, viewed transversely to the axial direction of the support sleeve.

26. Target support assembly according to Claim 23 or 24, wherein the clamping elements (6) and the recess (8) have an annular configuration.

27. Target support assembly according to any one of Claims 17, 18, 23 or 24, wherein at least one of said recesses (8) is formed as a groove (8a, 8b) selectively extending in the annularly circumferential, or axial direction, or helically on said cylindrical sleeves.

28. Target support assembly according to any one of Claims 17, 18, 23 or 24, wherein the length (L1) of the support sleeve (2) is greater than the length (L2) of the target sleeve (4) and at least one annular limiting part (9) is fixed detachably on the support sleeve (2) at selectively one or both ends of the target sleeve (4).

TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. 18501

In Re Application Of: **Ralf Landgraf**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/520,755	January 10, 2005	Jason Berman	23389	1795	5061

Invention: **TARGET SUPPORT ASSEMBLY**

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

The fee for filing this Appeal Brief is: **$540.00**

☐ A check in the amount of the fee is enclosed.

☒ The Director has already been authorized to charge fees in this application to a Deposit Account.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **191013**. I have enclosed a duplicate copy of this sheet.

☐ Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Signature

Dated: **March 17, 2010**

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